

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

JOSHI TECHNOLOGIES
INTERNATIONAL, INC.,

Plaintiff/Counterdefendant,

vs.

Civ. No. 15-467 KG/CG

CHI ENERGY, INC.,

Defendan/Counterclaimant.

MEMORANDUM OPINION AND ORDER

This matter comes before the Court upon Special Master S. Tim Smith, P.E.'s "Evaluation of Certain Working and Leasehold Interests and Accounting of Certain Revenue Streams" (Report), filed September 28, 2018. (Doc. 105). On January 14, 2019, Joshi Technologies International, Inc. (Joshi) filed objections to the Report, and on January 28, 2019, Chi Energy, Inc. (Chi) filed a response to those objections. (Docs. 118 and 121). Having considered the Report, the objections, and the response to the objections, the Court overrules the objections and adopts the Report.

A. Special Master's Report

Pursuant to the Order of Reference (Doc. 97), the Special Master prepared a Report in which he opined that:

1. The fair market value of Joshi's pre-September 2012 working interest ownership applied to the leasehold interests and wellbores (excluding the Zircon wells and undeveloped leasehold associated with the Zircon wells) as of September 1, 2012 is estimated to be \$39,826.
2. The fair market value of Joshi's pre-September 2012 working interest ownership applied to the wellbores only (excluding the Zircon wells) as of September 1, 2012 is estimated to be \$794.

3. The fair market value of Joshi's pre-September 2012 working interest ownership applied to the relevant Zircon wellbores (only) is estimated to be \$38,945 as of September 1, 2012. The term "relevant Zircon wells" are deemed in this analysis to be those that had at least been spudded by September 1, 2012.
4. The fair market value of Joshi's pre-September 2012 working interest ownership applied to the Zircon "leasehold" ... as of September 1, 2012 is estimated to be \$6,683.
5. The value of Joshi's pre-September 2012 working interest ownership applied to the "deep rights" in the wells as of September 1, 2019 is nominal. No value has been assigned to "deep rights" in my analysis.
6. The cumulative gross revenues and expenses calculable for Joshi's pre-September 2012 working and net revenue interests in the non-Zircon wells during the period from September 1, 2012 through March 1, 2018 are determinable, as needed, if additional data is acquired from Chi.
7. The cumulative gross revenues attributable to Joshi's pre-September 2012 revenue interest ownership applied to the Zircon wells during the period from September 1, 2012 through March 1, 2018 are provided by accounting month in tabular form in **Appendix 1**. The gross revenues are net of production taxes, excess royalty and marketing costs, but not operating or capital costs.
8. The cumulative gross expenses (operating expenses and capital costs) attributable to Joshi's pre-September 2012 working interest ownership applied to the Zircon wells during the period from September 1, 2012 through March 1, 2018 are provided by-month in tabular form in **Appendix 2**.

(Doc. 105) at 4 (citations and footnotes omitted).

1. Pre-September 2012 Fair Market Value (FMV) of Wellbores-Only¹

The Special Master observed that the purchase and sale agreements (collectively, the PSA documents), i.e., the September 10, 2012, agreement letter (Doc. 5-1) and the September 17, 2012, Assignment and Bill of Sale (Doc. 5-2), "do not specifically speak to the concept of a wellbore-only assignment." (Doc. 105) at 2. Consequently, the Special Master concluded that "under a hypothetical scenario that the transaction involved a wellbore-only assignment, there is no contractual guidance on what a wellbore-only assignment means." *Id.* The Special Master,

¹ The Court summarizes only those portions of the Report that are relevant to Joshi's objections.

therefore, utilized Joshi's definition of "wellbore-only." *Id.* at 2. Under that definition, "wellbore-only" means current producing zone only...." *Id.*

To calculate the pre-September 2012 FMV of wellbores-only, the Special Master first determined what type of reserve to attribute to the wellbores, either a Proved Developed Producing (PDP) reserve or a Proved Undeveloped (PUD) reserve. *Id.* at 12-13. A proved reserve "mean[s] there is a high confidence in the estimate of the volumes to be recovered...." *Id.* at 9. A developed producing reserve means the reserve is "expected to be recovered from completion intervals that are open and producing at the time of the estimate." *Id.* at 10. An undeveloped reserve has "quantities expected to be recovered through future investments." *Id.*

Second, the Special Master converted cash flows to present values, as of September 1, 2012, by applying a 20% present value discount rate (PV20). *Id.* at 13. The Special Master explained that the PV20 "is typical of discounts rates used by evaluators to calculate purchase price for assets or well packages similar to the one involved in this matter." *Id.*

Third, the Special Master "used a 90% reserves risk multiplier to adjust the discounted cash flows for uncertainty associated with the forecasts applicable to PDP Reserves." *Id.* at 13. The Special Master explained that "[t]he 90% factor is called a Reserves Adjustment Factor ('RAF'), and the 90% value (equal to a 10% reduction) is within the low end of the typical range used to value PDP reserves." *Id.* The Special Master applied a 50% RAF to adjust the FMV of Zircon 1 State Well No. 1H, which had a PUD reserve attributed to it. *Id.* at 14.

Finally, the Special Master applied "a 75% factor to adjust the cash flow for the fact that the Joshi interests are small, non-controlling interests." *Id.* The Special Master explained that "[s]mall, non-operated interests in a true arms-length transaction have less value in the market place." *Id.* at 13.

2. Deep Rights

The Special Master defined “deep rights” as the “rights to drill targets, if any, below the base of the Bone Spring” geologic formation. *Id.* at 15. Geologic intervals below the Bone Spring formation include the Wolfcamp geologic interval. *Id.* Although these deeper geologic intervals “produced either in the subject wells or wells located in the greater region surrounding the subject leases,” the Wolfcamp geologic interval, for example, was minimally explored and developed in September 2012. *Id.* The Special Master considered this situation and consulted with “third-party landmen” to conclude that the deep rights had no material value in September 2012. *Id.*

B. Joshi’s Objections

Joshi objects to certain parts of the Report. First, Joshi objects to the Special Master’s pre-September 2012 FMV of the non-Zircon wellbores-only. Second, Joshi objects to the Special Master’s conclusion that “the PSA documents do not specifically speak to the concept of a wellbore-only assignment.” *See* (Doc. 105) at 2. Finally, Joshi objects to the Special Master’s pre-September 2012 FMV of the “deep rights” in the wells. As provided in Fed. R. Civ. P. 53(f)(3) and (4), the Court reviews the objections to the Special Master’s Report *de novo*.

1. Pre-September 2012 FMV of Non-Zircon Wellbores-Only

Joshi argues that the pre-September 2012 FMV of \$794 for the non-Zircon wellbores-only is *per se* unreasonable and should be higher. Joshi further argues that the Special Master applied inappropriate discount rates to determine the pre-September 2012 FMV of the non-Zircon wellbores-only.

a. Whether Pre-September 2012 FMV of \$794 for Non-Zircon Wellbores-Only is Per Se Unreasonable

(1) 2011 Net Cash Flow for Non-Zircon Wellbores-Only

Joshi notes that for the 2011 production period the non-Zircon wellbores produced a net cash flow of \$12,764.64. (Doc. 118-2). Joshi states it “typically” evaluates three to five years of net cash flow before setting a sales price for its wellbore interests. “Joshi believes this is industry practice.” (Doc. 118) at 2. Considering the 2011 \$12,764.64 net cash flow and expected future plugging costs, Joshi asserts it set a reasonable price of \$11,000 for the non-Zircon wellbores, far above the \$795 valuation by the Special Master for those wellbores.

Chi challenges Joshi’s wellbore valuation method by observing that, according to Dr. Sadanand Joshi, Joshi “had not made any well-bore assignment prior to this particular Chi transaction.” (Doc. 121-2) at 3-4, depo. at 145-46. *See also* Answer to Interrogatory No. 16 (Doc. 121-1) at 3 (Joshi stated it was not party to wellbore-only assignment “in the five years preceding the Effective Date of the Assignment of September 1, 2012.”). Consequently, Chi asserts Joshi cannot have a “typical” method for valuing wellbore interests.

Even accepting Joshi’s “typical” valuation methodology, Joshi fails to explain what multiple in the three to five-year range it used to compute the pre-September 2012 value of non-Zircon wellbores. Also, Joshi does not indicate whether the 2011 net cash flow was higher or lower than the net cash flow as of September 1, 2012, the valuation date at issue. In addition, Joshi does not provide an evidentiary basis for the plugging costs it applies in its analysis. Furthermore, Joshi does not provide any evidence of an industry-approved wellbore valuation methodology that differs from the discounted cash flow approach the Special Master utilized. Considering the conclusory nature of Joshi’s 2011 net cash flow valuation argument, the Court determines it has no merit. Consequently, the Court overrules Joshi’s objection premised on the

Special Master's failure to utilize Joshi's 2011 cash flow analysis to value the non-Zircon wellbores-only.

(2) 2017 Sale of Chi's Interests to Colgate

Joshi further argues that Chi's sale of certain interests to Colgate in April 2017, less than five years after the sale at issue in this lawsuit, demonstrates that the Special Master undervalued the non-Zircon wellbores. For instance, Chi sold to Colgate its working interest and leasehold interest in the Remington Federal #1, #2, and #3 wells for \$22,812.50. (Doc. 118-3). Despite this sales price, Joshi observes that the Special Master valued the Remington Federal #1, #2, and #3 wells at \$4,046 (\$1,646 allocated to the wellbore interest and \$2,400 allocated to the undeveloped leasehold interest) as of September 1, 2012. (Doc. 105-1); Report's Ex. 2. Joshi contends that "while the Special Master received copies of the Purchase and Sale Agreement between Colgate and Chi, he makes no mention of whether he considered the sales prices at all in setting the FMV for Joshi's interests." (Doc. 118) at 2.

Chi contends that Joshi has not presented evidence that the Special Master failed to consider the Colgate transaction. Even so, Chi correctly observes that one cannot discern the value of wellbores-only from a single transaction price that also includes the purchase of leasehold interests. Also, Chi notes the Colgate transaction involved many leases other than the ones at issue here. According to Chi, this large overall transaction affects the prices of the individual interests. Joshi does not consider this aspect of the Chi transaction in its objection. Additionally, Chi appropriately notes that "[a] transaction so remote in time and involving interests with values strongly tied to uncertain and fluctuating commodities prices is of little if any relevance to the subject transaction." (Doc. 121) at 6. In fact, Joshi does not provide any authority to support a wellbore-only valuation methodology that relies on hindsight. For the

above reasons, the Court finds that the 2017 Colgate transaction does not provide a basis for objecting to the Special Master's pre-September 2012 FMV of non-Zircon wellbores-only.

Thus, the Court overrules Joshi's objection based on the 2017 Colgate transaction.

b. Discount Rates Used to Calculate Pre-September 2012 FMV for Non-Zircon Wellbores-Only

Joshi asserts that the Special Master inappropriately applied the PV20 discount rate value to the non-Zircon wellbores as of September 1, 2012. Furthermore, Joshi contests the Special Master's application of a 75% discount to account for Joshi's "small, non-controlling interests" in the non-Zircon wellbores. (Doc. 105) at 14.

(1) PV20 Discount Rate

Joshi argues first that the PV20 discount rate is unreasonably high for valuing the PDP reserves assigned to non-Zircon wellbores because "the PDP reserves are the least risky, with a high confidence in the commercial value...." (Doc. 118) at 3. Joshi contends that the Special Master should have applied a PV10, or a 10% present value discount rate, to the non-Zircon wellbores with PDP reserves to "more accurately reflect the actual FMV of the Non-Zircon Wellbores as PDP reserves." *Id.* at 4. Joshi notes that the Special Master also applied the PV20 to a Zircon wellbore assigned to a PUD reserve, a reserve more risky than a PDP reserve. Joshi argues that "the use of the PV20 discount rate to a riskier set of reserves is inconsistent and inaccurate." (Doc. 118) at 4.

Joshi cites a newsletter produced by ValueScope, Inc., a Texas oil and gas valuation firm, to support applying a PV10 to value the non-Zircon wellbores. ValueScope, however, observes that even "a flat PV10 analysis ... does not account for the variance in expected risk return profile between reserve types." (Doc. 118-1) at 2. ValueScope continues by noting that PDP "reserves by their nature are the least risky and deliver a lower annualized rate of return,

frequently below 10%.” *Id.* Consequently, “**PDPs may be slightly under valued in a flat PV10 analysis.**” *Id.* In fact, ValueScope states that “**PV10 values absolutely do not represent fair market value (FMV).**” *Id.* at 1. Value Scope further states that

Many factors, such as volumetric risk, required rates of return, future pricing, inflation, capital costs, and taxes can discount the fair market reserve value of an oil & gas asset by as much as 30% to 60% below the PV10. Unfortunately, many investors and their legal/financial advisors assume that PV10 and FMV are equivalent, and therefore make improper or inaccurate investment decision [sic] or transfers between business entities.

Id.

Significantly, ValueScope does not specifically address valuation or discount rates applicable to wellbores; ValueScope refers to reserve valuations. Moreover, Chi correctly notes that the Special Master did not tie the PV20 he applied to value wellbores-only to a reserve classification, like a PDP or PUD. The Special Master explained that PV20 “is typical of discount rates used by evaluators to calculate purchase price for assets or well packages similar to the one involved in this matter.” (Doc. 105) at 13. Aside from referring to the PDP reserve designations, Joshi does not explain why a PV10 is appropriate with respect to the non-Zircon wellbores, considering wellbore features like well volumes. In addition, the Special Master did not rely solely on the PV20 to make his pre-September 2012 FMV determination of the wellbores. The Special Master applied RAFs, which account for the different reserves, i.e., PDP or PUD reserves, associated with the wellbores. Joshi fails to convince the Court that the Special Master erred in using a PV20. The Court, therefore, overrules Joshi’s objection to the Special Master’s use of a PV20.

(2) 75% Adjustment Factor

Finally, Joshi objects to the Special Master’s use of a 75% adjustment factor to reflect Joshi’s minority, noncontrolling interest in the non-Zircon wellbores. Joshi states that it has no

knowledge of such a factor being utilized to value wellbores. Joshi also claims that the 75% adjustment factor artificially reduces the value of the non-Zircon wellbores because “Joshi’s interests were purchased by the operator of the Non-Zircon wells and the owner of other interests in the Zircon wells, Chi.” (Doc. 118) at 4. Joshi further argues that the 75% adjustment factor should not apply since the transaction at issue was not a “true arms-length transaction.” *Id.*

Although Joshi contends it has no knowledge of the use of a minority, noncontrolling interest factor in determining the FMV of wellbores, Joshi does not present evidence that such a factor falls outside the scope of industry standards for wellbore valuations. Joshi also does not present evidence on how or to what extent selling a minority, noncontrolling interest in a wellbore to its operator affects the valuation of the wellbore at the time of the sale.

Interestingly, Joshi does not provide a calculation of the pre-September 2012 FMV of the non-Zircon wellbores without the 75% adjustment factor. By the Court’s calculation, omitting the 75% adjustment factor increases the FMV of non-Zircon wellbores by only \$265.00. *See* Exhibit 1 (Doc. 105-1) (multiplying sub-total of PV20 cash flow for non-Zircon wells (\$1,177) by 90% RAF which equals (\$1,059), then subtracting original FMV for non-Zircon wellbores (\$794)). Such a minimal increase in the FMV does not impact the Special Master’s Report in a significant or meaningful way. For the aforementioned reasons, the Court overrules Joshi’s objection to the Special Master’s application of a 75% adjustment factor.

c. Conclusion

Having reviewed *de novo* Joshi’s various objections to the Special Master’s opinion that the pre-September 2012 FMV for the non-Zircon wellbores-only is \$794 and having overruled those objections, the Court adopts the Special Master’s opinion that the pre-September 2012 FMV for the non-Zircon wellbores-only is \$794.

2. *Conclusion that “PSA documents do not specifically speak to the concept of a wellbore-only assignment” (Doc. 105) at 2.*

Joshi objects to the Special Master’s conclusion that “the PSA documents do not specifically speak to the concept of a wellbore-only assignment.” (Doc. 105) at 2. Joshi argues that the Special Master is not qualified to make such a legal conclusion nor did the Court ask him to opine on the PSA documents. Joshi cites Rule 53(f)(4) to argue that the Special Master’s conclusion regarding the PSA documents “is a legal conclusion and must be decided *de novo* by the Court.” (Doc. 118) at 6.

Admittedly, the Special Master is not a lawyer. Nonetheless, as Chi observes, the Court stated in its Order Selecting and Appointing the Special Master: “The Special Master will assist the Court and parties in determining what assignments were made....” (Doc. 95) at 1. The Court further stated in its Order of Reference that “the Special Master’s task is to assist the [C]ourt in determining what assignments were purportedly made....” (Doc. 97) at 2. Also, the Court stated it appointed Mr. Smith as Special Master “to aid the Court in determining the issues of law and fact.” *Id.* at 1.

In light of the Order Selecting and Appointing the Special Master, and the Order of Reference, the Special Master’s conclusion that “the PSA documents do not speak to the concept of a wellbore-only assignment” and the following conclusion that “there is no contractual guidance on what a wellbore-only assignment means” fall within the scope of the Special Master’s appointment. Whether the Special Master’s conclusions regarding the PSA documents are legal conclusions or factual findings, Rule 53(f)(2) and (3) require the Court to review Joshi’s objections *de novo*.

The September 10, 2012, agreement letter simply lists Joshi’s non-Zircon wells with corresponding working interests amounts and locations. (Doc. 1-2). The Assignment and Bill of

Sale describes the assignment to Chi of Joshi's "oil and gas leases," and "wells," among other things, while Exhibit A of the Assignment and Bill of Sale lists both leases and non-Zircon wells. (Doc. 1-3). A review of those PSA documents supports the Special Master's conclusion that the PSA documents do not provide specific instructions or guidance on what a wellbore-only assignment means. Consequently, the Special Master found it necessary to define "wellbore-only," as Joshi defined it, to complete his Report. Notably, Joshi apparently does not contest the Special Master's use of its definition of "wellbore-only." Having reviewed Joshi's objection *de novo*, the Court overrules the objection to the Special Master's conclusion that "the PSA documents do not speak to the concept of a wellbore-only assignment." The Court, therefore, adopts that part of the Report.

3. Pre-September 2012 FMV of the "Deep Rights" in the Wells

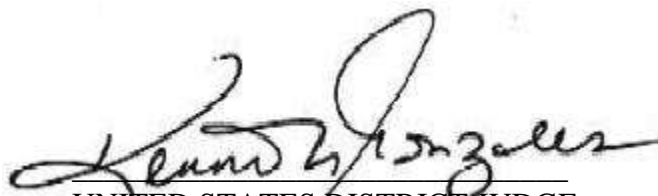
Joshi objects to the Special Master's opinion that the pre-September 2012 value of the "deep rights" of the wells is nominal. Joshi asserts that this opinion apparently contradicts the Special Master's definition of a wellbore-only assignment as a "current producing zone only." Joshi also contends that the deep rights had a much greater value when one considers the September 2012 potential for additional production. Joshi asserts that this greater value "is evidenced by the increased sales prices Chi received in 2017 for Joshi's interest in the Non-Zircon Wellbores and Leases." (Doc. 118) at 6. Joshi further notes that horizontal drilling in the Delaware Basin, especially in the Bone Spring Formation, where the leaseholds at issue lie, increased substantially before mid-year 2012. *Id.* at 6-8 (citing Fred Lawrence and Ron Planting, "An Oil Revolution is Taking Place in the US West and Mid-Continent," *Oil & Gas Financial Journal*, Vol. 9, No. 7 (July 1, 2012)).

The Special Master's definition of "deep rights" refers to rights to drill targets below the Bone Spring formation while his definition for "wellbore-only" refers to a current producing zone. "Deep rights" and "wellbore-only," therefore, refer to two different concepts. For example, it could be possible for a wellbore that goes to a certain depth to have some value while deep rights beneath the wellbore may have little value, depending on the geologic structure of the strata affected by the wellbore and deep rights. Thus, "wellbore-only" and "deep rights are not necessarily contradictory terms.

As the Court held above, Joshi's reference to the Colgate transaction to value an asset in hindsight is inappropriate. Moreover, the Colgate transaction's prices for both well and leasehold interests are unhelpful in valuing separate deep rights. Furthermore, Joshi does not explain how increased potential for production through horizontal drilling necessarily affects the value of deep rights. The Court notes that Joshi does not otherwise contest the Special Master's finding that the deeper zones were minimally explored and developed in September 2012, or the Special Master's consultation with third-party landmen. Having reviewed Joshi's objection to the Special Master's opinion on deep rights *de novo*, the Court overrules that objection and adopts the Special Master's opinion regarding deep rights.

IT IS, THEREFORE, ORDERED, that

1. Joshi's objections (Doc. 118) are overruled; and
2. the Special Master's "Evaluation of Certain Working and Leasehold Interests and Accounting of Certain Revenue Streams" (Doc. 105) is adopted by the Court in its entirety.



UNITED STATES DISTRICT JUDGE